



RTM Joint Committee: MISA & GHS Soil Remediation

by: RTM Joint Committee

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Mission

The following document was prepared by the Joint Committee (JtCom). The mission of this committee was to collect and study relevant information about the MISA Project and the GHS Soil Remediation issues, to synthesize the data, and finally present this work in the form of an unbiased, fact-based "white paper." Our hope is that this document provides the RTM with useful background information for the RTM's May 2012 Budget Meeting. All those involved worked on a compressed nine day schedule.

The JtCom Chairman wrote to all RTM members soliciting questions relating to the budget vote on MISA. Over 100 questions were returned. These questions were submitted to and answered by the BOE, BET, DPW, and the MISA Building Committee.

The following report summarizes the answers to all questions received by Wednesday, April 25, two days after the deadline. We also sought answers to questions presented after the 25th.these questions.

The complete list of questions submitted to the Town Departments and their complete responses will be available on the RTM web.

BUDGET PROCESS

For those who are new to the RTM and the Town Budget process, it may be helpful to know what happens after the BET issues its Budget Guidelines in September:

1. The Budget originates with the First Selectman who meets with all Town Departments and agrees on the budget necessary to operate the Town; the BOE independently develops its proposed operating budget. Capital projects are reviewed and recommended by the Capital Improvement Project Committee (CIP) and, after agreement, placed in the Budget.
2. The BET receives the Budget and with the Finance Department, consults with all other Departments to adjust the Budget as it deems necessary. The BET's essential role is to find ways to fund or finance the operating needs and capital project demands of the Town.
3. The RTM is tasked with approving the Budget. The RTM has options to approve as is or to approve as amended. It cannot increase the any line item in the budget. It can, however, reduce a line item by a specific amount or eliminate an item completely from the Budget.

1. HISTORY AND RATIONALE

1.1. History

- 1966-7:** Bids for GHS construction came back at 50% over BET budget allowance of \$8M. The auditorium suffered disproportionate cuts to absorb the initial budget shortfall. (Final cost to construct GHS: \$16M.)
- 1982:** Greenwich Time writes: “Considered an acoustical dud since its opening in 1970, the auditorium has deprived many audiences of the true sound created by orchestras, theatre groups...” (8/29/1982)
- 1993-0:** Work on auditorium scheduled for final phase of GHS science wing project; limited funds available for later phases. Renovations included no change in capacity or functionality for auditorium; HVAC noise exacerbated.
- 1997:** GHS introduced an 8-block schedule allowing significant growth in arts enrolment.
- 2000:** Enrolments require use of Auditorium as classroom space, impacting ability to hold school events. Many students unable to take classes due to capacity issues/ space limitations.
- 2004:** Acoustical consultants rate GHS auditorium a “3” on a scale of “10”.
- 2006:** Graduation requirements for Arts increased to 1.5 credits.
- 2007:** Funds for feasibility study appropriated: \$100K. Educational Specifications approved by BOE in November 2007.
- 2008:** Funds for Architectural and Engineering (A&E) work appropriated: \$2.13M. GHS MISA Building Committee formed in June 2008, a statutory requirement for school projects eligible for State reimbursement.
- 2011:** Construction funds of \$17M were approved by the RTM in May for MISA. The total cost of \$28.8M did not include pre-construction funding of \$2.23M, for total cost of \$31.1M. In July 2001, site work for parking lot expansion and other preliminary work began. This was when contaminants were discovered. Site work has since been completed.

1.2. Rationale

The BOE stated the music classrooms and auditorium facilities are undersized and substandard when compared to other high schools in Fairfield County and the state. The classrooms are overcrowded and poorly designed causing problems which cannot be addressed without expansion.

- Music Programs including Band, Orchestra, Choir, Electronic Music, Music Theory and Guitar continue to be held in classrooms that cannot hold the number of students who want to enroll. The Music Program routinely turns away students: 260 students in 2011-12 (9.6% of total students).
- Equipment storage space is inadequate so classroom space is used to store instruments and other valuable items. The auditorium is now used as a classroom.
- Choral, Orchestra and Band groupings are not able to rehearse or practice in a group format prior to performances or competitions.

- The auditorium accommodates only 31% of total enrollment; state guideline is 50%.

As part of the 2008 feasibility study, some proposed design solutions evaluated the renovation of the existing auditorium. Such renovation would require a smaller investment but would not resolve the issues of a substandard auditorium and lack of instructional space. The BOE evaluated the cost/benefit difference and voted to support a new building to achieve better functionality and deliver appropriate instruction:

http://www.greenwichschools.org/uploaded/district/Board_of_Education/meeting_materials/2011-12_meetings/4-26-12_meeting/42612_MISA_Ed_Specs.pdf

1.3. Public/ Private Partnership

The Campaign for MISA received pledges of \$1.22M to be used to offset the Town's Project cost. The funds will be given to the Town when the auditorium receives a Temporary Certificate of Occupancy. The BOE has a naming rights policy and has, to date, approved naming rights for spaces in the auditorium wing of the project. Some of these donations are tied to design elements (e.g. orchestra shell, orchestra pit) and could be withdrawn if the elements are substantially changed or removed.

1.4. Other Expenses

The furniture and equipment are included in the construction budget. The Gym HVAC system is not part of the MISA budget but is included in the BOE FY2012-13 capital budget at a cost of \$401K. This project will result in cost savings in other capital expenses as well as energy costs. Once construction starts on the new auditorium, the GHS gym will become "landlocked" and no longer able to open exterior doors for ventilation. (Pages 79-80 recommended FY '12-'13 Capital Budget).

1.5. State Reimbursement

1.5.1. BSF Process

The BOE can complete an application for project funding only after the RTM approves full project funding. Neither EPA approval of remediation nor BSF approval of the plans is needed to get on the approved project list. However, BSF approval is necessary to receive reimbursement payments. The State's annual deadline for applications is June 30th; the projects listed on that date will be eligible for inclusion in the State bonding resolution. At this time, Greenwich is eligible for up to a maximum 20% reimbursement rate. Until this project gets on the approved project list, the rate will be subject to legislative action.

The Building Committee cannot enter into contracts for construction unless it has access to the full appropriation. The project is structured so the Town can enter into separate contracts for each trade; however, the scope of work for each contract covers the complete project. It is in the Town's best interest to have large and continuous scopes of work upon which reliable contractors will bid. Costs will increase if the project cannot be bid as a single project. When the project was approved last year, the stated intention was to approve the second phase of financing in the current budget cycle. During its capital planning review, the BOE adjusted the project cost estimate for the information known at that time and forwarded the approved amount into the CIP process. The capital budget including MISA was approved by the First Selectman and the BET. It is part of the project plans for the Town and incorporated into the BET's financing model.

1.5.2. Reimbursement Rates

At the current rates, the maximum reimbursement is expected to be approximately \$4.1M, which represents a 15% haircut from the maximum reimbursement.

The BET capital model for the current year's budget assumes no reimbursement. Please refer to this link: <http://www.sde.ct.gov/sde/cwp/view.asp?a=2636&q=320552>

1.5.3. Eligible and Ineligible Expenses

Construction expenses are separated into eligible and ineligible cost categories according to the State's definitions. For MISA, the ineligible costs include repair of existing buildings, finishes, roofs, HVAC, and driveways impacted by the project. Eligible costs receiving limited reimbursement rate (50%) include auditorium seats and the pro-rated costs for the building surrounding the seats.

BSF reimbursement will include the project costs related to the instructional space and auditorium project only. Therefore, it will include costs to handle the contaminated soil and asbestos within the MISA project, but it will not cover costs for the GHS Fields. It should be noted that the BSF will not reimburse expenses already incurred prior to their approval of detailed plans/specs. So the \$1.5M cost to clean-up the site during summer 2011 will not be included in the reimbursement calculation.

The numbers were updated in April 2012 and are slightly higher than previously stated:

1.	Eligible costs:.....	\$22,363,455
2.	Limited eligibility (50%):	\$3,956,700
3.	Ineligible costs:	\$3,794,845
4.	Total project costs (per BSF filings):	\$30,115,000

1.6. BOE Capital Plan

The BOE approved its current capital plan in November 2011. While it is a 15-year plan, the BOE places its primary focus on the current budget year. The capital plan calls for spending \$60M across all buildings in the next five years. The focus is ongoing replacement/upgrade of elements that exceed their useful life such as window replacements, lighting and electrical system upgrades, bathroom renovations, flooring replacements as well as upgrades in technology. These funds support 16 locations totalling 1.5 million square feet. While some of these projects could be accelerated, the BOE does have a limit as to what it can accomplish in the 8 – 10 week summer construction window. The BOE has not discussed a revision to its current capital plan.

1.7. BET Funding Plan

MISA cannot be placed on the State's approved list for reimbursement until the full appropriation is made by the RTM. Until the project is listed, the rate will be subject to legislative action.

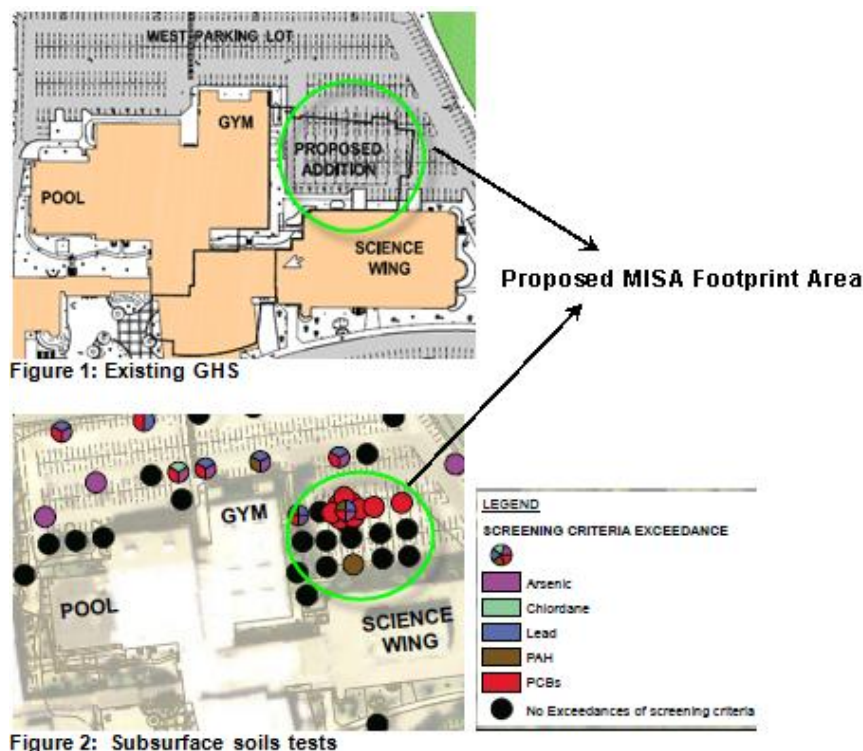
The Building Committee cannot enter into contracts for construction until the RTM approves the full appropriation.

2. MISA SCOPE CHANGES**2.1. Soil Contamination**

Phase I site work consisted of altering and enlarging the North, West and South Parking areas, the entrance roadway to Hillside Road and some on-site drainage work commenced after classes ended in June 2011.

During work on the westerly edge of West Parking lot, the contractor uncovered multiple areas of suspicious materials in the excavated soil. The contractor halted further work and subsequent soil testing revealed this soil was contaminated. As a result of this, an alternate drainage system needed to be designed.

Further testing indicated contamination at the GHS playing fields as well as the MISA footprint (Figures 1 & 2).



The proposed MISA area had additional soil borings drilled which accounts for the increased number of positive tests for contaminated material. This area was a planned excavation area anyway so the discovery of contaminants only changes how the excavated material will be handled. Contamination was also found in the location for the drainage system. This discovery caused a revision to the drainage system from an infiltration design to a detention system.

2.2. Water Contamination

Further studies focusing on the MISA auditorium design in early 2012 revealed groundwater contamination in the area of the highest soil contamination. To avoid the possible migration of contaminated water to the construction area, which is deep in the area of the proposed orchestra pit, the crew will construct a “cofferdam”.

The cofferdam is a temporary structure to prevent the possible flow of contaminated water into the orchestra pit foundation excavation area below the water table during construction. When foundation construction, including walls, is complete, the cofferdam will be removed or abandoned in place, depending on costs. The physical design of the cofferdam will be either a vertical impermeable barrier of concrete, sheet piles or secant wall. There are no anticipated on-going maintenance costs and no permanent monitoring is required for the cofferdam structure.

2.3. Actions Taken

During the summer of 2011, engineering plans were submitted to DEEP and EPA authorities to remove the already excavated contaminated soil (from the Parking Area), and fence off the westerly edge of West Parking lot. Funds for this work were authorized from the BET from a previously approved, by the RTM, line item funding actual new construction. This soil removal and fencing work was completed in the fall of 2011.

An engineering analysis of the MISA footprint and consultation with regulating agencies concluded the MISA footprint could have a separate remediation plan from the GHS fields.

2.4. Next Steps

A revised remediation plan to take into account both soil and water contamination within the MISA footprint has been submitted to the DEEP and EPA in March 2012 and is expected to be reverted in 30-60 days. The EPA review and approval of the remedial action plan is not dependent on the Town's appropriation of funds. If this remediation plan is approved, a submission to the Bureau of School Facilities for state approval would allow for bidding the project.

2.5. MISA COST CHANGES

Note - The figures provided are for MISA footprint ONLY and are inclusive of Building/Construction costs plus Environmental Impact costs. Some cost estimates are provided by the Construction Manager (Turner) and Environmental Consultants (AECOM). Exact figures won't be known until after the re-bidding.

The BET has released funds to the BOE as per Table 1, while Table 2 projects the funding for the full build out of MISA, including the MISA-related remediation costs

<u>MISA Appropriations</u>	<u>Amount</u>	<u>Spent or Committed</u>	<u>Purpose</u>
Feasibility Study	\$100,000	\$100,000	
Architectural and Enginr Study	\$2,130,000	\$2,130,000	
Construction funding	\$17,000,000	\$1,800,000	Site Work
		\$1,500,000	Contamination Cleanup
		\$250,000	Additional Soil Studies
Total	\$19,230,000	\$5,780,000	

Table 1: Spend to Date

From the FY2011-12 budget, \$1.5M of the construction funds were used to remediate the contaminated soil in the summer 2011 (see Section 2.3). This was necessary in order to restore the West parking lot to service so the start of school would not be delayed. Since the construction resources were under contract and on-site anyway, the Town authorized and the BET released \$1.5M of MISA contingency funds.

This spending is highlighted in Table 1 along with the additional \$250,000 for further soil testing, were not planned line-items in the original budget. The current budget request includes \$1.5M to replenish the correct construction line-items for the MISA construction project.

		Projected Cost	Approved by RTM 2011	Released by BET 2011/12	Requested of RTM FY12-13	
MISA Building Costs	Previous MISA Budget	\$28,815,000	\$17,000,000	\$1,800,000	\$11,815,000	Notes: \$1,800,000 - Parking lot work in Summer 2011 \$1,500,000 - MISA Building Funds used to remediate fields in Summer 2011 to be paid back by \$1,470,000 allocation in FY12-13
	Phase Funding Impact	\$400,000	\$0	\$0	\$400,000	
	Asbestos Abatement Work Allowance	\$300,000	\$0	\$0	\$0	
	Technical Education Area Work	\$300,000	\$0	\$0	\$300,000	
	Tree Work	\$200,000	\$0	\$0	\$0	
	South Lot Drainage	\$75,000	\$0	\$0	\$0	
	Sub Total	\$30,090,000				
Soil and Water Contamination Impact (MISA footprint)	Initial Soil Testing & Remediation	\$1,500,000	\$0	\$1,500,000	\$1,470,000	\$13,450,000 - RTM Approved Funds for MISA remain on conditions
	Escalation due delayed MISA Start(12 months)	\$860,000	\$0			
	MISA Cofferdam	\$700,000	\$0			
	MISA Soil Remediation	\$600,000	\$0		\$600,000	
	Increased MISA Schedule Duration(3 months)	\$400,000	\$0			
	Revised Drainage & Utility Work	\$300,000	\$0			
	MISA Redesign, Testing & Monitoring	\$250,000	\$0	\$250,000		
	Sub Total	\$4,610,000				
MISA Actual Costs through 31 Mar 2012	Pre Construction Feasibility Study	\$100,000				
	Architectural & Engineering	\$2,130,000				
	Sub Total	\$2,230,000	\$17,000,000	\$3,550,000	\$14,585,000	
	Grand Total	\$36,930,000				

Table 2: MISA Projected Budget

The increase in total estimated cost due to the discovery of the contamination is now estimated at \$4.61M as shown in Section 2 of Table 2. This is inclusive of redesign costs (\$250K) to account for remediation of both soil and water contamination issues at the MISA-only footprint. The amount called “MISA Soil Remediation” is projected to fund the remediation plan addressing the MISA footprint soil contamination. The cost estimates for that plan (\$600K) are included in the current capital request. Many of those line items are “not-to-exceed” figures and subject to the bidding process.

A non-MISA item for \$400,000 to address the poor air quality in the gym was a planned BOE capital project in future years but was brought forward due to MISA redesign. This item is not included in the Grand Total of Table 2 since it is a planned project of the BOE regardless of MISA.

2.6. Other Cost Factors

Costs were incurred by requirements set forth by other Town entities as part of MISA but not directly contributing to the educational benefit of MISA. According to BOE provided information, there were land use agency requirements that impacted the design and construction costs. Some of these include:

- maintaining the same number of parking spaces at GHS after project completion (required significant tree removal, paving, retaining walls, reduction of grass areas),
- replacement of trees,
- installation of a more expensive drainage system,
- addition of grass islands with bollards within parking lot,
- addition of underground system for tree roots,
- design and materials of exterior walkways, exterior design of building.

It was not possible, given our timeframe, to breakout the cost for some of these items, but the cumulative costs were represented to be substantive.

Construction insurance costs based on original site conditions, the breadth of work the Contractors expected, and to comply with the Town's requirements is in the construction cost estimate. The extent to which the Town may incur higher liability premiums due to site conditions during construction are unknown at this time but can likely be discussed with Town Counsel and the Risk Manager.

2.7.MISA Redesign Considerations

The BOE is responsible for identifying the Educational Specifications required in the project based on student need and, approving the design and budget developed by the Building Committee. In its April 2012 work session, the BOE reviewed the Educational Specifications that drive the building design in order to respond to questions about the need for the building's size and components. The BOE has recommitted that the current Educational Specifications, including the orchestra pit, are required in order to deliver an adequate music and theatre.

If the orchestra pit were to be raised above the water table in order to not have the build the cofferdam, the building would need to be at least 10-12 feet higher and would require costly solutions to address the elevation changes it would create. These changes include different elevations of parking lot/entrance, the gym, the science wing, auditorium, backstage areas. Most solutions would involve more ramps/elevators which add square footage and cost. In the current design, the height of the auditorium will be at the same level of the mezzanine on top of the science wing, which required a zoning variance for its height and FAR. There is concern that there would not be support for a P&Z variance for an even taller building if the cofferdam was ruled out.

3. GHS FIELDS REMEDIATION

3.1. Identification of Environmental Impacts and Interim Remedial Measures

In mid July 2011, during the course of the excavation work for the Greenwich High School Music Instructional Space and Auditorium (MISA) project, unexpected soil conditions were discovered in the West (or back) parking lot.

Initial test results showed levels of a class of chemicals known as poly-chlorinated biphenyls (PCBs) in soil above standards set by the Connecticut Department of Energy and Environmental Protection (DEEP). The plan for interim remedial measures (called IRMs) was reviewed and commented upon by regulatory agencies including the United States Environmental Protection Agency Region 1 (EPA), CT DEEP, and the Connecticut Department of Public Health (CT DPH). The IRMs included removal of surface soil in several areas surrounding the fields and fencing off of certain areas of the site, which allowed the reopening of Fields 1, 6 and 7 last fall. Concurrence to open Fields 2, 3, 4 and 5 was received in early March 2012. The work completed during the IRMs prevents direct exposure to impacted soil at or near the surface.

3.2. Regulatory Agency Involvement

The Town is working with both regulatory and advisory agencies on this project, as follows:

EPA: EPA Region 1 is involved because polychlorinated biphenyls (PCBs) in soil at concentrations ≥ 50 mg/kg have been found and this soil is regulated under the Code of Federal Regulations.

DEEP: CT DEEP is involved because PCBs and chlordane were detected at levels requiring notification to DEEP under the State's Significant Environmental Hazard Program.

CT DPH: This agency is involved because of the site use and will continue to be consulted regarding all actions. There is not an official program under which involvement is required but because the department includes experts in the areas of exposure and risk assessment, the Town has sought their involvement.

It is highly unlikely that the site will be enrolled in another federal program such as the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) as the site is not abandoned and the Town is actively engaged in investigation and remediation. Other remedial programs include federal and state Resource Conservation and Recovery Act (RCRA) but inclusion in these programs is unlikely because the site is being regulated by EPA under TSCA.

The Town's ongoing and open communication with these three regulatory agencies has been helpful as it has shown that the state and federal agencies do not need to resort to an enforcement action to force the Town to conduct the necessary activities leading to remediation planning and design. The Town has committed to showing progress on the GHS soils project, and through this process, the Town has more potential to control its project timeline and related expenditures.

3.3. Site Investigation

Investigation of impacts at the site is being performed in a phased manner and has involved sampling and analysis of soil, sediments, groundwater, and surface water. These investigations are not complete but significant progress has been made.

The summary of work completed includes the following:

December 2011:

- 49 soil borings
- 180+ soil samples collected and analyzed;
- installation of 4 monitoring wells; and
- collection and analysis of 7 surface water samples and 35 sediment samples.

February 2012:

- 32 soil boring
- 100+ soil samples collected and analyzed; and
- installation of 6 monitoring wells.

April 2012:

- 60 soil borings;
- 150+ soil samples collected and analyzed; and
- installation of 6 monitoring wells.

An additional phase of investigation is currently being planned for the 2012 summer break. The primary focus of the work to be completed includes the collection of soil and groundwater samples from beneath the synthetic turf fields.

It is unlikely that the synthetic turf surfaces are a source of contamination. Investigation data collected to date do not indicate that contamination from the synthetic turf fields has been identified. Other areas on site will also be investigated. Groundwater investigation activities will continue beyond August as seasonal and other variations in the data still need to be determined. Additional investigations may also be performed to fill identified data gaps or to more fully characterize soil.

The site investigation program is projected to be substantially complete at the end of this summer, followed by work in the fall summarizing the results.

3.4. Investigation Findings – see Map

Findings of the investigation program to date are as follows:

- There is a large area of impacted fill materials that were apparently placed on the site before and during construction of the original school buildings. The fill materials are found beneath Fields 2, 3, and 4 and a portion of Field 5 and the west parking lot extending under a portion of the proposed MISA footprint. The fill materials typically contain regulated concentrations of PCBs, polynuclear aromatic hydrocarbons (PAHs), lead, and arsenic and sporadic regulated concentrations of total petroleum hydrocarbons (TPH) and volatile organic chemicals. The highest concentrations of these contaminants of concern (COCs) are found in a 450 foot long area immediately to the east of Field 3. These impacts extend beneath a portion of the west parking lot and the extent of impacts under Field 3 will be determined during the summer break investigation.
- There is an area south of the brook with regulated concentrations of the metal arsenic. The arsenic may be naturally occurring (e.g., soil formed naturally from arsenic containing rock), because a release mechanism for another source has not been identified. Additional sampling and analysis is required to determine if the arsenic is native or from another source.
- There are areas around the brook with regulated concentrations of the pesticide chlordane. Chlordane was historically applied along the brook at the site for mosquito control and the release of this chemical is expected to have occurred during this application.
- There are sporadic impacts of PCBs to areas outside the primary location of fill probably due to limited placement of fill in other areas or onsite handling of soil during construction programs performed after the construction of the original school buildings. There are also limited TPH and PAH impacts outside the primary location of fill but these are likely due to historical paving operations or small releases of petroleum products.
- Groundwater impacts are not fully delineated at the site and additional monitoring well installation and site wide sampling will be required. However, data collected to date indicate that these impacts are primarily limited to the area where the highest concentrations of COCs in soil have been identified. Regulated concentrations of PCBs, TPH, and PAHs have been found in groundwater samples collected within this area but not outside this location. Regulated concentrations of barium have been detected at monitoring wells installed within and outside the area of fill at the site. The barium is not believed to be due to the fill and may be due to natural sources (e.g., naturally occurring rock and soil in the area).

3.5. Planning for Remediation

Alternatives for remediation will be developed following the completion of the site investigation activities and the evaluation of the data.

A feasibility study will begin in late summer or early fall. This phase of the project will include developing conceptual remediation alternatives for the site and will allow for the input of regulators and the community.

A preliminary project schedule has been developed and is attached. Please note this schedule is subject to change based on a number of factors including, but not limited to investigation program findings, regulatory input and approvals, community input, and site use coordination.

Remediation plans will be developed following the feasibility study process and acceptance of the recommended approach by the community and approval by the appropriate regulatory agencies.

3.6. Program Management and Approach

The project is managed by the Department of Public Works, with the Board of Education as an active and involved team member. In addition, DPW also works closely with the Parks and Recreation Department, given the latter's involvement in field maintenance and management. The Town has engaged AECOM, an environmental engineering and professional services company as a program manager. AECOM has worked for the Town on environmental and infrastructure related projects for many years. In addition, AECOM has experience at other school sites within Connecticut that have identified and remediated environmental issues, as well as national expertise in this field. The AECOM team includes the following:

- Connecticut Licensed Environmental Professionals (LEPs) familiar with Connecticut environmental regulations and experience in performing investigations and remedial actions in Connecticut.
- Remedial engineers, including professional engineers (PEs) with experience in scoping and implementing remedial actions anticipated for the site and expertise in the state and federal PCB regulations.
- Hydrogeologists with experience in evaluating complex groundwater/surface water systems similar to that found at the site.
- Toxicologists with experience in performing human health and ecological risk assessments that will be utilized in remedial planning.
- AECOM has worked on many sites that contain similar contaminants and challenges. As with every project, the GHS site poses its own unique set of constraints. In addition, AECOM has worked on several other school remediation projects including Wooster School Hartford, CT; Hamden Middle School; New Hamden Middle School; and McDonough School. At this time, we do not have complete remediation costs for each of these projects. The AECOM project team also has experience at other school projects focused on PCB investigation and remediation in addition to other large scale campus/large site properties.
- The Town is also using the services of outside counsel from McCarter and English. This firm has provided the Town with excellent advice and guidance on other environmental matters for more than twelve years, and has extensive experience and success in working on these types of projects with DEEP and EPA in CT, as well as experience in other parts of the country.

3.7. Compare and Contrast with Cos Cob Power Plant Remediation

AECOM is currently working on the remediation project for the Former Cos Cob Power Plant (CCPP). The CCPP project shares some common characteristics with the GHS project including the excavation and disposal of PCB impacted soils. This project also includes the active participation by the regulatory agencies, including CT DEEP and EPA. There are specific engineering differences. The CCPP land form is being recreated to cap the contaminants in place and facilitate redevelopment of the Site. In addition, groundwater is not an issue at CCPP.

As noted above, the former Cos Cob Power Plant (CCPP) and GHS projects share some common characteristics. However, there is no meaningful connection from a project planning and cost comparison standpoint. A new landform has been created at the CCPP without significant limitations regarding schedule and access. Investigation and potential remediation of the GHS is planned to be coordinated closely with and limited by the school functions. The GHS site also includes many more physical limitations and features as compared with the CCPP site. These include student and faculty parking and the athletic fields.

The CCPP site was a brownfields site eligible for federal and state grant programs. Based on the current understanding of the GHS environmental issues and a review of the federal and state grant programs, it does not appear the GHS site is eligible for such programs. The Town is exploring whether there is an opportunity to recover costs from parties responsible for the environmental issues identified at the site; however, potentially responsible parties have not been identified to date.

The cost for the CCPP project, including investigation, onsite building demolition, two phases of remediation and proposed final redevelopment (a new park with all its associated infrastructure) is estimated at \$12-15 million. Final redevelopment design is just beginning and redevelopment construction costs are not known currently, but may be approximately 1/3 or more of this total estimate. This potential final cost has been somewhat offset by federal and state grant programs. Again, this project is not comparable to the GHS soils project in economic terms.

3.8. Program Costs

The cost for the initial site investigation and soils removal is well documented in the GHS MISA project summaries.. The funds expended to date in the capital account opened last fall have covered work on interim remedial measures including engineering, spot soil removal, fencing, testing, oversight and related activities, as well as overall site investigation/testing activities for site characterization, legal counsel, engineering and program management for activities conducted to date, regulatory communications and meetings, and public communications development. Work will continue over the summer including additional site investigation and testing, as well as work on the feasibility study. Please note \$1.5M has been budgeted for FY 2012/13 for investigation, feasibility study, remedial planning and design and potential start of remediation.

DPW believes the GHS project is still in the Phase II/III environmental site assessment phase. Projecting costs during the investigation phase of the project is extremely difficult. Preliminary estimates for feasibility studies, remedial planning and design as well as remediation will be prepared following completion of the investigation program. **It is still too soon to determine the overall program cost. Many factors could influence the cost for site remediation. A range of potential costs is not available at this time.**

DPW will continue to work closely with the First Selectman's Office and the Board of Estimate and Taxation as more information becomes available and DPW works on its 15 year capital plan, as well as with its BOE and Parks and Recreation team members.

3.9. Summary of Potential Remediation Activities

The following is a description of what remediation is currently anticipated to include and how it may impact site uses and the community:

- Excavation of soil with higher concentrations of COCs that is suspected of being the source material for the limited impacts to groundwater. Removal of these materials will address soil remediation needs and will likely remediate groundwater impacts as well.
- Removal of remaining shallow soil impacts (from 0.5 feet below grade to probably 2 feet below grade) to create a clean area at the surface. Performance of these actions will likely allow for removal of fencing installed during the IRMs and reduce restrictions on future maintenance activities that are routinely performed.
- The first phase of remediation potentially may be performed during the 2013 summer break. A goal, if possible, is to limit impacts to school operations and site uses, particularly the athletic program. Subsequent remedial activities could be scheduled in a similar manner so that continued use of the school can continue largely unimpeded. This will all be dependent on what remediation is required and what can or cannot be accomplished during summer break periods.

- All efforts will be made to limit impacts to the community as a whole. It is anticipated that remedial efforts will involve excavation and anticipated control measures and scheduling to minimize impacts including:
- Dust suppression and monitoring systems to prevent releases of COCs and to protect the high school occupants and surrounding community.
- Soil disposal vehicle routing and scheduling to minimize impacts to traffic.
- Best management practices will be implemented during remediation design to address storm water management and water quality.
- Remediation associated with MISA can and will be performed separately from site-wide remedial activities.
- It is not anticipated that remediation will remove all of the soil impacted by COCs. As such, long-term maintenance and monitoring programs will be required by the regulatory agencies. The long-term maintenance and monitoring program will be required for as long as impacted soil remains at the site. Costs for these activities will be developed after the remediation program has been developed. These activities are expected to include:
- Maintenance of surface cover (e.g., playing fields, turf-covered areas, and pavement) to maintain the clean barrier between site users and impacted soil for as long as the impacted soil remains in place.
- Groundwater monitoring to determine that COCs remain in place in soil and are not mobilized through groundwater migration.

A financial surety so that governmental agencies can assume maintenance and monitoring activities in the case that the Town is determined to have defaulted on these obligations.

3.10. Low Impact Development (LID)

The GHS site is being reviewed in accordance with the Town's requirements for stormwater management (which incorporates what we have to do to satisfy the state, also). Keep in mind that LID (low impact development) techniques try to infiltrate water into the site being developed. Infiltration is not necessarily a good idea on a contaminated site, so in turn LID techniques must be evaluated carefully in such situations to determine where, if at all, they are appropriate. As we develop the site remediation plan, we will be looking at these issues during the design process. We have been working with the MISA project team to incorporate appropriate measures into its design given the site conditions.

3.11. Separate Project?

Has the EPA agreed that the MISA Remediation is independent of the Fields Remediation?

EPA and DEEP are currently reviewing the MISA Remediation Plan. To the best of our knowledge, the agencies have not yet formally determined if the separation of the MISA and site wide remediation is acceptable.

4. FINANCIAL IMPACT OF MISA AND GHS FIELDS SOIL CONTAMINATION

The following assumptions are reflected in the Town's financial plans:

- **Soil remediation costs:** The 2012-13 budget includes \$2.1 M for MISA testing, plans, and remediation and \$1.5 M for the GHS fields environmental testing. The current capital plan does not include any other remediation costs. However, \$7M is set aside by the BET in the Capital Non Recurring Fund for remediation. The time period for the GHS fields clean-up will ultimately be determined by the DPW working with the Town's environmental consultants and lawyers, and their negotiations with DEEP (CT) and the EPA.

- **Debt level:** The long-term plan shows the Town's debt level not exceeding the current ceiling of \$210M. The General Fund debt level is projected to be \$96M by June 30, 2013. The BET indicates there are no current plans to increase the debt limit. However, the Debt Policy provides for a review of the debt limit no less than every two years.
- **Mill rate:** Mill rate increases are traditionally in the 2-4% range. No change in the mill rate range is under discussion by the current BET.
- **Interest rates:** The model assumes 1.0% for BANS and 2.0% for Bonds. The most recent TOG borrowings were executed with BAN interest of 0.13% and Bond interest of 0.659%.
- **MISA-related revenues:** The long-term forecast does not at this time include any funds from the Campaign for MISA due to the uncertainty of the amounts and timing of receipts. Also, the forecast does not include any reimbursement from the State for MISA.

The BOE developed a capital plan that it believes appropriately addresses the capital needs of the schools. The projects addressing major systems (HVAC, roofs) are mostly complete, so capital is now being focused on areas that are more visible to the users of the buildings (lighting, flooring, bathrooms, wireless technology). While some of these projects could be accelerated, the BOE has a limit as to what it can accomplish in the 8 – 10 week summer construction window. The BOE has not discussed a revised capital plan.

The BET discussed "shared sacrifice" with the BOE. The 2012-13 BOE capital budget has reductions in other areas to offset the higher MISA costs. The original submission was reduced by \$2.3M during the CIP process and the BET reduced the BOE Budget by an additional \$500K.

The BET discussed capital limitations at the April Budget Committee meeting and will meet with Town Departments in May to explain the constraints on capital spending.

New projects, other than Central Fire, MISA and TNW, such as Police Radio, Holly Hill, GEMS and NW Fire, were part of the BET discussion regarding capital limitations at the April Budget Committee meeting and will be addressed at the Budget meeting on capital expenditures in May, at the CIP meetings, and in the 2013-14 capital plan.

4.1.RTM Decision Options

Under the Town Charter with respect to the budget vote, RTM members can approve, reduce, or delete a requested line item. In the BET Reference Book, dated 2012-2014, BET conditions are defined as follows:

"The BET may impose conditions on an appropriation that cannot be changed by the RTM. This may be done either as part of the budget process or when authorizing an interim appropriation. Such conditions require the requesting agency to request a further release of (approval to use or spend) the appropriation upon presenting the evidence to the BET that the requirements of the conditions have been met. In imposing such conditions, the BET should use concise and clear language, and the condition should establish an objective standard to measure compliance."

The RTM cannot impose conditions on the release of approved funds; only the BET can do that. In the budget book, the MISA line items are as follows (680 Board of Education, page 12):

956 13163 MISA:\$12,215,000
 956 13164 MISA Soil Contamination: \$ 2,070,000
 956 13165 MISA Renovate Tech Ed: \$300,000

The GHS Soils Remediation line item follows (315 DPW, page 11):

983 13134 GHS Remediation:\$1,500,000

With respect to the proposed MISA line items, RTM members can take the following votes:

4.1.1 Approve the requested line item(s):

In this case, MISA must also satisfy the conditions established by the BET and obtain approval of release in order to move forward. The BET adopted the following two conditions for the release of funds for the \$12.215M appropriation:

1. the BET's receipt and acceptance from the MISA Building Committee of all bids for MISA, and
2. Its receipt and acceptance of a report from the Campaign for MISA.

These conditions mirror the conditions placed in the FY2011-12 budget on the \$17M Phase 1 appropriation.

Conditions are approved by BET during the budget process. The BET may require more information when needed to address any conditions. The BET could choose to have an informational session related to release of funds if they thought new material caused a need. This project has been through six public forums in the past 26 months.

The release of conditions will follow the normal process, which does not include the RTM. It is exclusively the purview of the BET process whereby the BET Budget Committee reviews the condition and votes, then the full BET reviews and votes on the appropriation release. All of these meetings are publicly noticed and usually televised, although public comment is not allowed when the BET makes its final decision.

If the bids for MISA exceed the approved appropriation, the Building Committee would need to seek approval from both the BET and the RTM for an interim appropriation. Based on the Building Committee's current cost estimates for MISA, it anticipates that it will need to seek interim appropriations totalling \$575K for MISA construction and \$2.5M for the environmental impact of the MISA footprint soil contamination.

4.1.2 Reduce the requested line item(s):

If the reduction were a material amount, the Building Committee would have to incur additional costs for architectural and engineering fees (which totalled \$2.1M for the current project) and for land use approvals for a new project. In addition, this action would delay construction; and construction costs are forecast to escalate by up to 2.5% annually. Other costs of a delay are as follows:

- Require additional planning costs since Land Use approvals may lapse and building codes may change.
- The risk of a lower reimbursement rate since such action continues as part of the State's discussion for two consecutive years.
- Unknown costs if the pool of bidders is smaller or if contractors are not convinced the Town will award the contract after putting in the work to submit.

4.1.3 Delete the requested line item(s):

\$3.4M of the approved Phase 1 appropriation of \$17.0M is spent or committed to date, including the \$1.5M spent on the MISA footprint soil testing and remediation. DPW anticipates it will have more detailed information on the scope and plan for the GHS fields soil remediation in the fall. The MISA Building Committee could ask the BET and RTM to approve an interim appropriation in the fall for Phase 2 of MISA.

If the RTM votes to discontinue all further work on MISA, it would cost approximately \$200K to restore the site, including expenditures for lighting, tree replacement and parking lot modifications. This would be in addition to the \$5.78M that was spent or released for MISA.

DPW would continue to address the necessary remediation on the high school site, including that for the MISA footprint. DPW spent almost ten years on the remediation of the Cos Cob Power Plant site so the Town can anticipate a reasonable time line to complete the GHS project. It's unlikely the Federal or State regulators will demand a precipitous deadline.

END